

AVERP2720US

Title:

CONFORMABLE AND DIE-CUTTABLE BIAXIALLY ORIENTED FILMS AND LABELSTOCKS

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Abstract of the Disclosure

One embodiment of this invention is a die-cuttable, biaxially stretch-oriented monolayer film comprising a polyethylene having a density of about 0.940 g/cm³ or less, a propylene polymer or copolymer, or mixtures thereof, wherein the tensile modulus of the film in the machine direction is greater than the tensile modulus in the cross direction, the tensile modulus of the film in the cross direction is about 150,000 psi or less, and the film is free of copolymers of ethylene with an ethylenically unsaturated carboxylic acid or ester. In one embodiment, the biaxially oriented monolayer films have been biaxially stretch-oriented and heat set.

In another embodiment, the invention relates to a die-cuttable, stretch-oriented multilayer film comprising

(A) a base layer having an upper surface and a lower surface, and comprising polyethylene having a density of about 0.940 g/cm³ or less, a propylene homopolymer or copolymer, or mixtures thereof wherein the base layer is free of copolymers of ethylene with an ethylenically unsaturated carboxylic acid or ester, and

(B) a first skin layer of a thermoplastic polymer bonded to the upper surface of the base layer, wherein the tensile modulus of the multilayer film in the machine direction is greater than the tensile modulus in the cross direction, and the tensile modulus in the cross direction is about 150,000 psi or less. The biaxially oriented multilayer films are useful in particular in preparing adhesive containing labelstock for use in adhesive labels.

In yet another embodiment, the invention relates to a diecuttable, biaxially stretch-oriented monolayer film comprising at least one

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polyolefin wherein the film has been stretch-oriented in the machine direction at a stretch ratio of about 9:1 to about 10:1, and in the cross direction at a stretch ratio of from greater than 1:1 to about 3:1.